

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

ECOFACITOR, INC.,
Plaintiff,

v.

ECOBEE, INC.,
Defendant.

Case No. 6:20-cv-00078-ADA

JURY TRIAL DEMANDED

ECOFACITOR, INC.,
Plaintiff,

v.

ECOBEE, INC.,
Defendant.

Case No. 6:21-cv-00428-ADA

JURY TRIAL DEMANDED

LEAD CASE

DEFENDANT'S MOTION FOR PARTIAL SUMMARY JUDGMENT

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Defendant (“ecobee”) hereby moves for partial summary judgment as set forth below.

I. INTRODUCTION

EcoFactor has been asserting patent infringement allegations against ecobee for over three years, including in two previous ITC Investigations and several district court litigations. Each litigation has followed the same pattern, with EcoFactor initially asserting four patents against ecobee, and taking unsupportable positions throughout fact and expert discovery until dropping the most baseless of its claims on the eve of trial. Then, at trial, ecobee has prevailed on EcoFactor’s “best” claims, with ecobee’s products being found not to infringe and EcoFactor’s patents being found invalid.

Here, as the parties are once again nearing trial, ecobee asks the Court to decide three issues where no genuine dispute exists as to any material fact. EcoFactor should withdraw its claims relating to these issues altogether, but because it has not the Court should rule that ecobee is entitled to judgment as a matter of law.

First, the Court should find that the asserted ’100 Patent is invalid for lacking adequate written description under 35 U.S.C. § 112. There can be no dispute that the asserted claims of the ’100 Patent include two separate steps in connection with selection of a delay interval. There is (1) an evaluation step and (2) a determination step. However, the ’100 Patent fails to describe the evaluation step involved in implementing an appropriate delay. There is no description of what the evaluation step entails, what it is used for, or how it relates to any determination of a delay interval. Moreover, the patent requires that each of the two steps must be performed using certain parameters—which must include outside temperature measurements and a predicted rate of change in inside temperature. However, the only disclosure of the determination of a delay interval in the ’100 Patent’s specification does not describe the use of any predicted rates of change in

temperature, and thus does not describe the determination step of the claims. Consequently, the '100 Patent fails to convey that the inventors had possession of the claimed subject matter as of the filing date. The Court should, therefore, find the '100 Patent to be invalid.

Additionally, the Court should decide at this stage that the record cannot rationally permit ecobee to be found to *indirectly* infringe or *willfully* infringe the '100, '186, or '890 patents. It is undisputed that EcoFactor did not put ecobee on notice of these patents prior to filing the complaint initiating the -00428 litigation. Nor is there any evidence in the record that ecobee knew of these patents before this litigation. Indeed, there is no evidence ecobee was aware of any of EcoFactor's patents, much less the patents EcoFactor is asserting in this litigation, before the litigation campaign commenced. Moreover, one week before EcoFactor filed the '00428 litigation, ecobee's products were found not to infringe similar EcoFactor patents in an ITC Investigation involving patents with claim limitations that overlap with those asserted here. Thus, at the time this litigation was filed, ecobee had clear reasons to believe it was not infringing EcoFactor's patents and therefore cannot be found to have the intent required to establish indirect or willful infringement. Moreover, as this litigation has progressed, EcoFactor's litigation campaign has continued to result in findings of non-infringement as to ecobee. In view thereof, the Court should find that the record does not permit EcoFactor to establish that ecobee indirectly or willfully infringes the '100, '186, or '890 patents.

Finally, the Court should also find that the '327 patent is directed to patent-ineligible subject matter under 35 U.S.C. § 101. The '327 patent claims conventional implementations of abstract ideas that do not improve any HVAC or computer technology, and are ineligible for patent protection under 35 U.S.C. § 101. As explained below, the claims of the '327 patent are directed to the abstract idea of changing thermostat settings to reduce electricity demand. The claims,

however, do not define any concrete, technological improvements. Nor do they embody any inventive concept. The asserted claims therefore fail both steps of the eligibility test under *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208 (2014) and so should be found invalid.

II. STATEMENT OF ISSUES TO BE DECIDED BY THE COURT

(1) Whether ecobee should be granted summary judgment that all asserted claims of the '100 Patent are invalid for lacking sufficient written description under 35 U.S.C. § 112.

(2) Whether ecobee should be granted summary judgment of no indirect infringement of the '100, '186, and '890 Patents.

(3) Whether ecobee should be granted summary judgment of no willful infringement of the '100, '186, and '890 Patents.

(4) Whether ecobee should be granted summary judgment that all asserted claims of the '327 Patent are directed to patent-ineligible subject matter under 35 U.S.C. § 101.

III. STATEMENT OF UNDISPUTED MATERIAL FACTS¹

A. Background

(1) On January 30, 2020, EcoFactor filed its complaint initiating the -00078 litigation accusing ecobee of infringing the following United States patents: U.S. Patent No. 8,180,492 (“the '492 Patent”); U.S. Patent No. 8,412,488 (“the '488 Patent”); U.S. Patent No. 8,738,327 (“the '327 Patent”); and U.S. Patent No. 10,534,382 (“the '382 Patent”). *See* Case No. 6:20-cv-00078, D.I. 1.

(2) On April 28, 2021, EcoFactor filed its complaint initiating the -00428 litigation accusing ecobee of infringing the following United States patents: U.S. Patent Nos. 8,740,100

¹ Each individual statement is referred to by number *infra* as “SUF __.”

[REDACTED]

[REDACTED]

(“the ’100 Patent”); 8,751,186 (“the ’186 Patent”); 9,194,597 (“the ’597 Patent”); and 10,584,890 (“the ’890 Patent”). *See* D.I. 1.²

(3) On July 25, 2022, the -00078 Action and the -00428 Action were consolidated. *See* D.I. 41.

(4) The remaining patents at issue between the parties are the ’327 Patent, the ’100 Patent, the ’186 Patent, and the ’890 Patent. For the purposes of the motions contained herein, the ’100 Patent, the ’186 Patent, and the ’890 Patent will be collectively referred to as “the -00428 Asserted Patents.”

B. Issue #1: The Asserted Claims of the ’100 Patent Lack Written Description

1. The Requirements of the ’100 Asserted Claims

(5) EcoFactor has accused ecobee of infringing claims 1-16 of the ’100 Patent (“the ’100 Asserted Claims”). Ex. 1 [de la Iglesia Report] at ¶ 24.

(6) Claims 1 and 9 of the ’100 Patent are independent claims, and the remaining ’100 Asserted Claims are dependent claims. Ex. 2 [’100 Patent] at cl. 1-16.

(7) Claims 1 and 9 of the ’100 Patent are directed to systems and methods for “reducing the usage of a ventilation system” (claim 1) and “optimizing the delay enforced by a thermostatic controller” (claim 9). *Id.* at cl. 1, 9.

(8) Each of the ’100 Asserted Claims requires at least two settings for a delay interval to be enforced by a thermostatic controller after a ventilation system turns off before the thermostatic controller will be allowed to signal the ventilation system to turn on again. Ex. 2 [’100 Patent] at cl. 1, 9.

² For purposes of this motion, unless otherwise stated, citations to docket entries are for the lead case, Case No. 6:21-cv-00428.

(9) Each of the '100 Asserted Claims includes a limitation (the “Determining Limitation”) requiring determination of the specific delay interval to be enforced by the thermostatic controller based upon the values of certain parameters—which parameters must include at least (i) outside temperature measurements *and* (ii) the predicted rate of change in inside temperatures. Ex. 2 [’100 Patent] at cl. 1, 9. In addition to the Determination Limitation, each of the '100 Asserted Claims also includes a separate limitation (the “Evaluating Limitation”) requiring an evaluation of the parameters. *Id.* at cl. 1, 9.

(10) For instance, claim 1 of the '100 Patent requires a computer processor configured to “*evaluate* one or more parameters including at least the outside temperature measurements and the predicted rate of change, and to *determine* whether to adopt said first interval or said second interval based upon the values of said parameters.” *Id.* at cl. 1.

(11) Similarly, Claim 9 of the '100 Patent requires “*evaluating*, with at least one computer processor, one or more parameters relating to the operation of the said ventilation system . . . wherein evaluating the one or more parameters comprises evaluating at least the outside temperature measurements and the predicted rate of change” and “*determining* which of at least a first interval and a second interval is to be enforced as a delay by said thermostatic controller in light of at least the outside temperature measurements and the predicted rate of change, wherein said second interval is longer than said first interval.” *Id.* at cl. 9.

(12) The original non-provisional application leading to the '100 Patent, submitted on May 5, 2010, did not include the '100 Asserted Claims’ requirement that the predicted rate of change be one of the parameters that must be evaluated and then used in the determination of the delay interval. *See* Ex. 3 [May 5, 2010 Claims in '100 File History] at 15-16. Rather, this requirement was added by amendment on July 15, 2013, without any explanation of where the

specification submitted with the original patent application includes support for that amendment. *See* Ex. 4 [July 15, 2013 Amendment in '100 File History] at 2-5.

2. The '100 Patent's Specification Lacks Sufficient Disclosure of the Evaluating Limitation and the Determining Limitation

(13) The specification of the '100 Patent does not describe the Evaluating and Determining Limitations required by each of the '100 Asserted Claims. *See* Ex. 26 [D'Andrade Report] at ¶¶ 182-190.

(14) In fact, the only portion of the '100 Patent's specification that even mentions an "evaluation" of any parameters is the Abstract, which merely recites, without explanation, that "[a] processor is in communication with the thermostatic controller and is configured to evaluate one or more parameters including at least the temperature outside the structure conditioned by the ventilation system." This disclosure does not describe any details regarding the "evaluation," such as what the evaluation entails, what the purpose of the evaluation is, or how it relates to the determination of an appropriate ventilation delay. Moreover, to the extent the Abstract describes an evaluation at all, it certainly does not describe the evaluation of a predicted rate of change in inside temperatures, as is required by the claims. Ex. 2 ['100 Patent] at Abstract; *see also* Ex. 26 [D'Andrade Report] at ¶ 186.

(15) EcoFactor's validity expert, Dr. John Palmer, does not claim in his rebuttal report that the Abstract provides written description support for the claimed Evaluation Limitation. *See* Ex. 5 [Palmer Report] at ¶¶ 94-121.

(16) Dr. Palmer looks to Figure 7 and column 8 of the '100 Patent to opine that the patent includes adequate written description for the evaluating and determining steps required by the claims. *See* Ex. 5 [Palmer Report] at ¶ 97.

(17) The '100 Patent describes Figure 7 as “show[ing] a flowchart illustrating the steps required to initiate a compressor delay adjustment event.” Ex. 2 ['100 Patent] at 3:52-53.

(18) In the Figure 7 embodiment, once the server determines whether a specific home is eligible to participate in compressor delay events, “in step 1108 the server retrieves the parameters needed to specify the compressor delay routine.” *Id.* at 8:49-51. The Figure 7 embodiment describes that the retrieved parameters “may include user preferences, such as the weather, time of day and other conditions under which the homeowner has elected to permit hysteresis band changes, the maximum length of compressor delay authorized, etc.” *Id.* at 8:51-55. However, the Figure 7 embodiment does not include the predicted rate of change of temperatures inside the structure among its recited list of parameters for use in specifying the compressor delay routine, as required by the asserted claims. *See* Ex. 26 [D’Andrade Report] at ¶¶ 184-186.

(19) Dr. Palmer opines that this retrieval of user preferences is an example of the claimed Evaluating Limitation. Ex. 5 [Palmer Report] at ¶ 101. But this portion of the '100 Patent’s specification does not describe any evaluation of the retrieved parameters. Ex. 26 [D’Andrade Report] at ¶ 185. Instead, the Figure 7 embodiment merely describes that once the parameters are retrieved, “[i]n step 1110 the appropriate compressor delay settings are determined.” Ex. 2 ['100 Patent] at 8:55-56.

(20) Thus, the '100 Patent’s description of the Figure 7 embodiment does not describe any evaluation of the retrieved parameters. Nor does it describe the relationship between any evaluation of parameters and the determination of which ventilation delay setting to adopt (i.e., the

relationship between the Evaluating Limitation and the Determining Limitation).³ See Ex. 26 [D’Andrade Report] at ¶¶ 185.

(21) Dr. Palmer also points to other portions of the ’100 Patent’s specification to opine that the inventors of the ’100 patent were in possession of the claimed invention. Ex. 5 [Palmer Report] at ¶¶ 103-10.

(22) However, none of the portions of the specification cited by Dr. Palmer disclose any evaluation of parameters nor any determination of a particular ventilation system delay interval. See, e.g., Ex. 2 [’100 Patent] at 2:11-40 (discussing prior art thermostats that require a user to manually adjust compressor delay); 3:61-4:20 (describing hysteresis bands, and not the selection of delay intervals); 4:21-67 (describing the results of a compressor delay interval on a hysteresis band); 5:1-45 (describing demand response as an intended benefit of compressor delay, but not describing any evaluation of parameters); 5:46-8:2 (describing “bi-directional communication” between server and thermostat for “diagnostic and controlling functions,” but not describing evaluation of parameters for delay intervals).

(23) Similarly, Figures 6(a) and 6(b) of the ’100 Patent, upon which Dr. Palmer also relies, simply show graphs of measured inside temperatures, outside temperatures, and HVAC activity over a previous 24-hour period. See, e.g., Ex. 2 [’100 Patent] at 8:3-19. The Figure 6 embodiment is unrelated to the selection of a delay interval—and thus does not describe any evaluation of parameters or determination of which delay interval to adopt.

³ Nor would any potential evaluation of parameters disclosed include the evaluation of a predicted rate of change, as required by the Asserted Claims.

(24) Figures 8(a)-(c) of the '100 Patent, upon which Dr. Palmer also relies, are described as “illustrat[ing] how changes in compressor delay settings affect HVAC cycling behavior by plotting time against temperature.” *Id.* at 3:54-56; 8:58-60.

(25) For example, Figure 8(a) depicts a plot of the resulting indoor temperature in a home where the setpoint for the thermostat was set to 70 degrees F, and the compressor delay was set to approximately 3 minutes. *Id.* at 8:58-9:14. Figure 8(b) depicts a plot of the resulting indoor temperature in a home where the setpoint for the thermostat was set to 70 degrees F, and the compressor delay was set to approximately 8 minutes. *Id.* at 9:14-24. And Figure 8(c) depicts a plot of the resulting indoor temperature in a home with the same thermostat setpoint and compressor delay setting as Figure 8(b), but different outdoor weather conditions. *Id.* at 9:31-33.

(26) Thus, Figures 8(a)-(c) depict after-the-fact effects of implementing compressor delays. They do not depict any forward-looking evaluation of parameters or determining of delays to be implemented. Nor do they depict any evaluation of parameters for determining a delay for a *ventilation system*, as required by the claims.

(27) Dr. Palmer does not dispute that Figures 8(a)-(c) illustrate after-the-fact implementation effects of compressor delays. Ex. 5 [Palmer Report] at ¶ 115; *see also id.* at ¶ 22 (“Figs. 8A-8C illustrate how changes in compressor delay settings affect the cycling behavior of the HVAC system.”).

(28) Instead, Dr. Palmer opines that the graphs of the after-the-fact effects of selecting a compressor delay nonetheless disclose that the inventors had possession of the claimed invention, despite not disclosing the steps in the claimed Evaluating Limitation and Determining Limitation leading to the selection of the ventilation system delay. *See id.* at ¶ 115.

C. Issue #2: ecobee should be granted summary judgment of no indirect infringement for the -00428 Asserted Patents

1. ecobee Had No Pre-Suit Knowledge of the -00428 Asserted Patents

(29) In its interrogatory responses, EcoFactor asserts that ecobee knew of EcoFactor and the -00428 Asserted Patents before this suit was filed. Ex. 6 [EcoFactor's Second Supp Resp. to ecobee First Set of Rogs] at 49.

(30) However, to support this assertion, EcoFactor only cites to broad ranges of deposition testimony that, at most, relate to when certain ecobee employees knew of EcoFactor generally. Ex. 6 [EcoFactor's Second Supp Resp. to ecobee First Set of Rogs] at 49 (*citing to* Ex. 7 [8-20-21 Carradine Tr.] at 55:24-76:14; Ex. 8 [8-19-21 Trinh Tr.] at 18:15-19:10; 214:18-215:13). Nothing in this testimony establishes when ecobee first gained knowledge of any EcoFactor *patents*, let alone the -00428 Asserted Patents.

(31) In its responses to ecobee's Requests for Admission, EcoFactor admits that it did not provide ecobee with notice of the alleged infringement of the -00428 Asserted Patents prior to the filing of the -00428 litigation, on April 28, 2021. Ex. 9 [EcoFactor's Resps. to ecobee's First Set of RFAs] at RFAs 16-19.

(32) This aligns with the testimony of Mr. Chris Carradine, the ecobee witness designated to testify in this litigation regarding topic 50 of EcoFactor's notice of corporate deposition: "The facts and circumstances surrounding when [ecobee] first became aware of each Asserted Patent and Plaintiff." At his deposition, in response to a question regarding when ecobee became aware of EcoFactor's patents, Mr. Carradine testified that [REDACTED]

[REDACTED] Ex. 10 [9-27-22 Carradine Tr.] at 91:22-92:3.

(33) Despite this testimony and EcoFactor's RFA responses, with respect to knowledge of the -00428 Asserted Patents and indirect infringement, EcoFactor expert Mr. de la Iglesia

(34) There is no factual evidence in the record, however, demonstrating that ecobee was aware of any of the -00428 Asserted Patents prior to EcoFactor's commencement of the -00428 case.

(35) There is no factual evidence in the record demonstrating that ecobee knew the accused products infringe the Asserted Claims of the -00428 Asserted Patents (which ecobee denies), or that ecobee intended for the accused products to infringe the Asserted Claims of the -00428 Asserted Patents (which ecobee denies).

(37) EcoFactor has been asserting patents from its portfolio against ecobee products for three years. By the time EcoFactor filed the complaint initiating the -00428 litigation on April 28, 2021, EcoFactor had already filed two separate ITC investigations against ecobee, as well as co-pending district court litigations. The substance and outcomes in those litigations form reasonable bases for ecobee to believe that its accused products do not infringe any Asserted Claim of any -00428 Asserted Patent.

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others, infringed U.S. Patent Nos. 8,131,497 (“the ’497 Patent”); 8,423,322 (“the ’322 Patent”); 8,498,753 (“the ’753 Patent”); and 10,018,371 (“the ’371 Patent”). *See* Ex. 11 [1185 Complaint] at ¶¶ 1-5, 71-75.

(39) As the 1185 Investigation proceeded toward trial, after EcoFactor took extensive fact discovery related to ecobee’s products, EcoFactor withdrew its infringement allegations against ecobee as to the ’322 and ’371 Patents (despite continuing to assert those patents against other respondents), and moved to dismiss its infringement claims as to the ’753 Patent against all respondents. *See* Ex. 12 [1185 Order No. 27]. Thus, at trial in the 1185 Investigation, the only patent that EcoFactor alleged against ecobee was the ’497 patent.

(40) Following a several day hearing and extensive post-hearing briefing, the ALJ issued his Initial Determination for the 1185 Investigation on April 20, 2021, finding that ecobee’s products did not infringe any of the claims asserted against it. *See* Ex. 13 [1185 ID] at 110-153. Among the many reasons the ecobee products were found not to infringe, the ALJ found that ecobee’s products neither received “outside temperature measurements from at least one source other than said HVAC system,” nor calculated “one or more rates of change in temperature.” *Id.* at 124-153.

(41) The present case involves the same ecobee accused products that were found not to infringe in the 1185 Investigation. *See* Ex. 13 [1185 ID] at 6; Ex. 1 [de la Iglesia Report] at ¶84.

(42) The ’100 and ’186 patents also contain the same limitations that ecobee was found not to infringe in the 1185 Investigation. *See, e.g.,* Ex. 2 [’100 patent] at claims 1, 9 (requiring stored data that includes “outside temperature measurements” and using “the stored data to predict a rate of change of temperatures inside the structure”); Ex. 14 [’186 patent] at claims 1, 8 (requiring

receiving “outside temperature measurements” and calculating “one or more predicted rate of change in temperature.”)

(43) EcoFactor filed its complaint initiating the instant litigation 8 days after the Initial Determination in the 1185 Investigation.

(44) On July 20, 2021, the Commission determined not to review the Initial Determination’s findings of non-infringement as to ecobee. *See* Ex. 15 [1185 Comm’n Opinion] at 6-7, 14-16.

(45) EcoFactor filed, but subsequently withdrew, an appeal of the 1185 Investigation to the Federal Circuit.

b. 1258 Investigation in the ITC

(46) On February 25, 2021, EcoFactor filed another complaint with the ITC under Section 337 of the Tariff Act of 1930 (the “1258 Investigation”), alleging that ecobee, among others, infringed U.S. Patent Nos. 8,019,567 (“the ’567 patent”); U.S. Patent No. 10,612,983 (“the ’983 patent”); U.S. Patent No. 8,596,550 (“the ’550 patent”); and U.S. Patent No. 8,886,488. *See* Ex. 16 [1258 Complaint] at ¶¶ 90-96.

(47) In the 1258 Investigation, after EcoFactor once again took extensive discovery related to ecobee’s products, EcoFactor withdrew its allegations against ecobee with respect to the ’567 and ’983 Patents on the eve of trial. Ex. 17 [1258 Order No. 26]. Thus, at trial in the 1185 Investigation, the only patents that EcoFactor alleged against ecobee were the ’550 and ’488 patents.

(48) Following another weeklong hearing and another round of post-hearing briefing, ALJ Elliot issued his Initial Determination for the 1258 Investigation on April 4, 2022, finding that ecobee’s products did not infringe any of the claims asserted against it. *See* Ex. 18 [1258 ID]

at 36-45, 89-92. Similar to the 1185 Investigation, the Initial Determination found that, among other reasons, ecobee's products neither receive "outside temperature measurements," nor predict "rates of change" in temperature. *Id.* at 37-41, 91-92.

(49) Like the 1185 Investigation, the 1258 Investigation involved the same ecobee accused products that are at issue in the present case. *See* Ex. 18 [1258 ID] at 6; Ex. 1 [de la Iglesia Report] at ¶84.

(50) As explained above, the '100 and '186 patents also contain the same limitations that ecobee was found not to infringe in the 1258 Investigation. *See, e.g.*, Ex. 2 ['100 patent] at claims 1, 9 (requiring stored data that includes "outside temperature measurements" and using "the stored data to predict a rate of change of temperatures inside the structure"); Ex. 14 ['186 patent] at claims 1, 8 (requiring receiving "outside temperature measurements" and calculating "one or more predicted rate of change in temperature.").

(51) On June 22, 2022, the Commission affirmed that ecobee's products do not infringe either the '488 or '550 Patent, once again finding that, among other reasons, ecobee's products do not receive outside temperature measurements or calculate predicted rates of change in temperature. Ex. 19 [1258 Comm'n Op.] at 7-8, 33-35, 37-40, 68-69. The Commission also determined not to review the ID's findings that both patents were invalid. *See id.* at 7-8.

3. The requirements of the claims ecobee was found not to infringe in the 1185 and 1258 Investigations overlap with the requirements of the Asserted Claims

(52) As explained above, each of the '100 Patent and the '186 Patent asserted against ecobee includes claim limitations requiring that the ecobee Accused Products receive outdoor temperature measurements. *See, e.g.*, Ex. 2 ['100 patent] at claims 1, 9; Ex. 14 ['186 patent] at claims 1, 8. Similarly, each of the '100 Patent and the '186 Patent asserted against ecobee also

includes claim limitations requiring that the ecobee Accused Products calculate or predict rates of change in inside temperature. *Id.*

(53) As explained above, these are the same limitations that the ecobee products were found not to practice in both the 1185 and 1258 Investigations. *See* Ex. 13 [1185 ID] at 124-153, Ex. 15 [1185 Comm’n Op.], Ex. 18 [1258 ID] at 37-41, 91-92, Ex. 19 [1258 Comm’n Op.] at 7-8, 34-35, 37-40, 68-69. The outcomes in these litigations thus form a reasonable basis for ecobee to believe that its Accused Products also do not infringe the -00428 Asserted Patents in this case.

4. ecobee’s Accused Products Have Substantial Non-Infringing Uses

(54) EcoFactor’s expert, Mr. de la Iglesia, asserts – without any evidence or analysis – that the ecobee thermostats “are not capable of substantial non-infringing uses with respect to the geofencing, Time of Use, and Community Energy Savings/Demand Response optimizations that infringe the asserted claims.” Ex. 1 [de la Iglesia Rep] at ¶605. As described below, however, even assuming that the ecobee Accused Products practice the -00428 Asserted Patents (which ecobee disputes), the undisputed factual evidence establishes that the ecobee Accused Products have substantial non-infringing uses.

(55) The Accused Features of the ecobee Accused Products all require that the ecobee thermostats be connected to the internet. However, the ecobee Accused Products are designed to operate in the absence of an internet connection. Ex. 20 [Souri Report] at ¶¶ 32-34, 488. Mr. de la Iglesia does not dispute this fact. Thus, the use of the ecobee Accused Products in absence of an internet connection would be non-infringing.

(56) Moreover, with respect to the ecobee Time of Use feature accused of infringement, that feature is only used when the Accused Products are connected in an environment where a utility company employs varying energy rates. Ex. 20 [Souri Report] at ¶ 488.

(57) Similarly, with respect to the ecobee Demand Response (or Community Energy Savings) feature accused of infringement, that feature requires that utility companies have the capability of sending demand response events to the Accused Product. Ex. 20 [Souri Report] at ¶ 488.

(58) Further, the various occupancy detection features accused of infringing the '890 Patent are also dependent upon the Accused Products being employed in specific operating environments. For example, the AutoPilot feature accused by EcoFactor can only be implemented in the very rare circumstance when the accused ecobee thermostats are used in connection with a separate, optional ecobee Smart Camera, or home security service. Ex. 20 [Souri Report] at ¶ 488. And for iOS users who do not have Autopilot, the accused geofencing functionality requires the use of a separate third party app. *Id.*

D. Issue #3: ecobee should be granted summary judgment of no willful infringement for all Asserted Patents

(59) In its interrogatory responses, EcoFactor bases its allegation that ecobee's alleged infringement has been willful upon an allegation that ecobee knew of EcoFactor and the -00428 Asserted Patents before this suit was filed, and nonetheless continued to infringe. Ex. 6 [EcoFactor's Second Supp Resp. to ecobee First Set of Rogs] at 36.

(60) As described above, there is no factual evidence in the record demonstrating that ecobee was aware of any of the -00428 Asserted Patents prior to EcoFactor's commencement of the -00428 case; ecobee did not have knowledge of the -00428 Asserted Patents until filing of the Complaint initiating the -00428 litigation on April 28, 2021. *See supra* at SUFs 30-34.

(61) As described above, there is no factual evidence in the record demonstrating that ecobee knew the Accused Products infringed the Asserted Claims of the -00428 Asserted Patents (which ecobee denies), or that ecobee intended for the Accused Products to infringe the Asserted

Claims of the -00428 Asserted Patents (which ecobee denies); the record demonstrates, in fact, that ecobee had a reasonable belief that the Accused Products did not infringe the Asserted Claims of the -00428 Asserted Patents. *See supra* at SUFs 35-53.

E. Issue #4: ecobee should be granted summary judgment that all Asserted Claims of the '327 Patent are directed to ineligible subject matter under 35 U.S.C. § 101

1. Summary of the '327 Patent

(62) The '327 patent relates generally to HVAC systems and more particularly to the use of thermostats to verify that demand reduction has occurred. *See* Ex. 21 ['327 Patent] at Abstract, 1:21-27. According to the patent specification, because HVAC systems can be a significant source of energy consumption, to reduce consumption during periods of peak demand, many utilities have programs whereby customers would agree to reduce usage during certain critical periods in exchange for incentives from the utility, like rebates. *See id.* at 1:57-64, 2:15-26. These financial incentives, however, create a risk of fraud that a customer might tamper with their HVAC system to avoid reducing usage during a peak demand period as they agreed to do, thus requiring the utility to monitor and verify compliance. *Id.* at 2:53-59.

(63) The '327 specification describes a method to verify compliance with such demand reduction programs by proposing a system that predicts how the indoor temperature measured inside a structure changes in response to outside temperature. *Id.* at 3:25-4:13.

(64) Under the proposed system, measurements for indoor and outdoor temperatures are compared over time to derive an estimation for the rate of change in inside temperature in response to an outside temperature. *Id.* at 7:48-54. The system then compares the estimation with an actual measurement to determine whether the HVAC system is on or off. *Id.* at 7:55-64.

(65) The '327 specification makes clear that at the time of the invention, only “conventional” components were necessary to practice the claimed inventions. *See, e.g., Id.* at 5:19-46. In its “Detailed Description of Preferred Embodiments,” the specification discloses generic, routine, and/or well-known technology, including:

- a. the “World Wide Web” (*id.* at 5:1–2);
- b. “HTML” (*id.* at 5:5);
- c. “websites” (*id.* at 5:9–12);
- d. “local area networks, interactive television networks, telephone networks, wireless data systems, two-way cable systems, and the like” (*id.* at 5:16–18);
- e. “conventional computers” (*id.* at 5:20);
- f. “processors such as those sold by Intel and AMD” (*id.* at 5:22–23);
- g. “general-purpose processors, multi-chip processors, embedded processors and the like” (*id.* at 5:24–25);
- h. “handheld and wireless devices such as personal digital assistants (PDAs), cellular telephones and other devices capable of accessing the network” (*id.* at 5:26–28);
- i. “browser[s] configured to interact with the World Wide Web,” such as “Microsoft Explorer, Mozilla, Firefox, Opera or Safari” (*id.* at 5:29–31);
- j. “random access memory (RAM), electronically erasable programmable read only memory (EEPROM), read only memory (ROM), hard disk, floppy disk, CD-ROM, optical memory, or other method of storing data” (*id.* at 5:35–39);
- k. “operating system such as Microsoft Windows, Apple Mac OS, Linux, Unix or the like” (*id.* at 5:40–42); and

1. “Ethernet, wireless protocols such as IEEE 802.11, IEEE 802.15.4, Bluetooth, or other wireless protocols” (*id.* at 6:24–26).

(66) EcoFactor asserts independent claim 1 and dependent claims 2, 5, and 8-10 of the ’327 patent.



(67) Claim 1 of the ’327 patent recites functions of a “system for controlling the operational status of an HVAC system” that comprises a “thermostat” in communication with “one or more servers” via a network:

- a. receive temperature measurements from a structure conditioned by an HVAC system;
- b. receive outside temperature measurements from a source other than the HVAC system;
- c. compare the inside temperature of the structure and the outside temperature over time to derive an estimation for the rate of change in the inside temperature in response to the outside temperature.

(68) ’327 Patent claim 1 then does nothing with the derived estimation in function (c) above, but instead detours to the following functions:

- a. receive a demand reduction request and determine whether the structure is associated with the request; and
- b. if the structure is associated with the request, send a signal to the thermostat to change its setting to reduce electricity demand by the HVAC system.

(69) The asserted dependent claims of the ’327 patents recite:

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- a. One or more servers ('327 patent) receive measurements of outside temperatures for geographic regions such as ZIP codes from sources other than said HVAC system. *See* Ex. 21 ['327 Patent] at claim 2.
 - b. The estimation in claim 1 is a prediction about the future rate of change in temperature inside said structure. *See Id.* at claim 5.
 - c. The second setting in claim 1 allows the inside temperature of the structure to increase to a certain temperature during a specified time interval. *See Id.* at claim 8.
 - d. The second setting in claim 1 is based on an agreement between a homeowner and a demand reduction aggregator. *See Id.* at claim 9.
 - e. The servers of claim 1 are further configured to send an alert to a user associated with the structure. *See Id.* at claim 10.

(70) The '327 patent claims above refer to physical componentry such as an HVAC system, processors, servers, and a programmable thermostat, but only recite such componentry in the context of performing the functions above.

2. The '327 Patent's Use of Conventional Components and Calculations

(71) The '327 patent acknowledges that the claimed inventions are carried out with “conventional” components. *See* Ex. 21 ['327 Patent] at 5:19-33, 5:51-53. Scott Hublou, a named inventor on the '327 patent, also confirmed that he did not invent any of the hardware components recited in the patents, including the HVAC unit, the thermostat, the gateway, the computer, the laptop, a network, a utility server, a database, the hardware behind the demand reduction service server, and the hardware behind a database connected to the demand reduction server. *See* Ex. 22 [Hublou Tr.] at 126:13-22, 136:1-138:1.

(72) Mr. Hublou further confirmed that he could perform the “rate of change” calculation recited in the ’327 patent “in his head.” *Id.* at 130:18-131:3. EcoFactor’s validity expert, John Palmer, likewise confirmed that the “rate of change” calculation being described in the ’327 patent claims would be the equivalent of the slope between two different points on a graph. *See* Ex. 23 [11-8-21 Palmer Tr.] at 81:19-82:16 (“if you have a graph, then . . . a typical way of determining the slope of that graph is by looking at the temperature difference between two points divided by the time difference between the two points”), 93:12-17.

(73) EcoFactor’s infringement expert, Erik de la Iglesia, described the material in column 7 of the ’327 patent as being an application of Newton’s law of heating and cooling. *See* Ex. 24 [10-29-21 de la Iglesia Tr.] at 78:18-20. As described by Mr. de la Iglesia, “Newton’s laws of heating and cooling[] dat[e] back to approximately the year 1700” and “describe the rate of change of temperature as a function of time as being proportional to the difference between an object’s temperature and the temperature of its surroundings.” *See* Ex. 25 [9-27-21 de la Iglesia Report] at 14. He goes on to say that Newton’s law “can easily be modified” to add “a heating or cooling device such as an HVAC system.” *Id.* at 15.

(74) Mr. Hublou also confirmed that the data and calculations in the provisional applications to which EcoFactor’s patents claims priority involved “rudimentary math on Excel spreadsheets and graphing.” *See* Ex. 22 [Hublou Tr.] at 158:19-25; *see also id.* at 169:121-23 (Mr. Hublou tested his hypotheses using “Excel spreadsheets” and “crude types of calculations and graphing abilities”). Mr. Hublou collected the data that formed the basis of the provisional applications from thermostats at the houses of his friends and family and then used Excel to generate hand-drawn graphs that formed the basis of the patent figures. *Id.* at 172:4-21, 173:13-174:9.

(75) Dr. Palmer confirmed that a human could “sit there with a pencil and paper and write down a whole bunch of temperatures and times” and “then tak[e] that data and analyz[e] it” to “compar[e] inside and outside temperatures over time and develop[] from that an estimated rate of change,” as recited by the claims of the ’327 patent. *See* Ex. 23 [11-8-21 Palmer Tr.] at 93:1-9, 94:7-15 (“[W]ould it be theoretically possible for a person to collect a large amount of data? Yes. Would it be theoretically possible without any computational aid for that person to evaluate that large quantity of data in such a way as to provide a reasonable estimate of the rate of change over time in the context of a particular set of conditions? . . . [T]here are a few people that could.”).

IV. APPLICABLE LAW

Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-24 (1986). An issue is not genuine if the trier of fact could not, after an examination of the record, rationally find for the non-moving party. *Matsushita Elec. Indus., Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986). A court must view the evidence and draw factual inferences in a light most favorable to the nonmoving party opposing summary judgment. *Impossible Elecs. Techniques v. Wackenhut Protective Sys., Inc.*, 669 F.2d 1026, 1031 (5th Cir. 1982). But “[w]hen opposing parties tell two different stories, but one of which is blatantly contradicted by the record, so that no reasonable jury could believe it, a court should not adopt that version of the facts for the purposes of ruling on a motion for summary judgment.” *Scott v. Harris*, 550 U.S. 372, 380-81 (2007).

V. ARGUMENT

A. The Asserted Claims of the ’100 Patent Lack Written Description

Clear and convincing evidence establishes that the ’100 Patent does not convey with reasonable clarity to a POSITA that the inventors “had possession of the claimed subject matter as

[REDACTED]

of the filing date.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). “The ‘written description’ requirement implements the principle that a patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor’s obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed.” *Capon v. Eshhar*, 418 F.3d 1349, 1357 (Fed. Cir. 2005). It is not “sufficient . . . that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). Similarly, “while the description requirement does not demand any particular form of disclosure . . . or that the specification recite the claimed invention in haec verba, a description that merely renders the invention obvious does not satisfy the requirement.” *Ariad*, 598 F.3d at 1352. Rather, the test is an objective one, focused on whether the disclosure within “the four corners of the specification . . . describe[s] an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.” *Ariad*, 598 F.3d at 1351.

Here, the ’100 Patent fails the written description requirement because the specification does not describe the claimed invention within its four corners—a failure that is fatal to every ’100 Asserted Claim. Each of the ’100 Asserted Claims recites a selection between ventilation system delay intervals based upon certain parameters—which must include outside temperature measurements and a predicted rate of change of temperature inside the structure. *See supra* at SUF 8. In selecting the appropriate ventilation system delay interval, the ’100 Asserted Claims include a separate Evaluating Limitation and Determining Limitation. *See supra* at SUF 9. More specifically, the claims require both (i) an *evaluation* of the outside temperature measurements and

predicted rate of change (i.e., the above-referenced parameters), and (ii) a *determination* of which delay interval to adopt based upon the values of the parameters. *See supra* at SUF 10-11.

However, as described further below, the '100 Patent fails to describe how the required Evaluating and Determining Limitations are to be performed, how (or if) the evaluation step impacts the determination step, and how the claimed outside temperature measurements and predicted rate of change parameters are to be utilized in the Evaluating and Determining Limitations for the purposes of choosing a ventilation system delay interval. In fact, using the predicted rate of change is not discussed *at all* with respect to any aspect of delay interval selection, whether for a ventilation system or otherwise.

First, with respect to the Evaluating Limitation, the only place in the specification of the '100 Patent that recites any evaluation of parameters is in the Abstract. *See supra* at SUF 14. However, this barebones recitation does not show that the inventor was in possession of the claimed invention because it simply states that parameters are “evaluated,” without any further explanation. *Id.* It does not, for example, describe any details regarding the “evaluation,” such as what the evaluation entails, what the purpose of the evaluation is, how the evaluation is performed, or how (if at all) the evaluation relates to the determination of an appropriate delay. *Id.* Moreover, the Abstract’s disclosure does not list any predicted rates of change as a parameter to be evaluated, as is required by the '100 Asserted Claims. *Id.* Thus, to the extent the Abstract describes the evaluation of *something* (it does not), it certainly does not describe the evaluation specified in the Asserted Claims. *Id.* Tellingly, Dr. Palmer does not claim in his rebuttal report that the Abstract provides written description support for the claimed Evaluating Limitation. *See supra* at SUF 15.

Instead, Dr. Palmer contends that the Figure 7 embodiment, which the '100 Patent describes as “a flowchart illustrating the steps required to initiate a compressor delay adjustment

event,” discloses the Evaluating Limitation and a description of its required parameters. *See supra* at SUF 16. However, Dr. Palmer’s assertions conflict with the specification. The Figure 7 embodiment simply includes a retrieval step (“in step 1108 the server retrieves the parameters needed to specify the compressor delay routine” – Ex. 2 [’100 Pat.] at 8:49-51) followed by a determination step (“[i]n step 1110 the appropriate compressor delay settings are determined” – *id.* at 8:55-56). Dr. Palmer’s assertion that the claimed evaluation is depicted in retrieval step 1108 is plainly incorrect, as Figure 7 does not include any evaluation step, nor any description of how, if at all, the alleged “evaluation” step feeds into, relates to, or differs from the determination step. *See supra* at SUF 17-20.

Nor does the Figure 7 embodiment provide adequate description of the claimed Determining Limitation. The ’100 Asserted Claims require that the claimed determination step be based upon the values of specific parameters, including the predicted rate of change of inside temperatures. In Figure 7, the “parameters needed to specify the compressor delay routine” that are retrieved in step 1108 neither include any predicted rates of change nor relate to any delay for a ventilation system. Thus, step 1110’s determination of the appropriate compressor delay settings does not disclose the claimed determination step.⁴ *Id.*

By failing to disclose any description of the evaluation of any parameters, nor how that evaluation relates to or impacts the determination of a particular delay interval based upon the values of those parameters, the ’100 specification does not provide adequate disclosure to satisfy 35 U.S.C. § 112 for the ’100 Asserted Claims. “One shows that one is “in possession” of the

⁴ That the Figure 7 embodiment does not recite the claimed predicted rate of change as one of its disclosed parameters to be used in the specification of a delay routine is unsurprising given that the ’100 Asserted Claims’ reference to the predicted rate of change parameter was added during prosecution through amendment years after the original application was filed. *See supra* at SUF 12.

invention by describing the invention, with all its claimed limitations, not that which makes it obvious.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

Dr. Palmer also attempts to cobble together a theory that the ’100 Patent satisfies the written description requirement by pointing to various unrelated snippets across the ’100 Patent to assert that “the inventors of the ’100 Patent were in possession of their invention.” *See supra* at SUF 21. Here, Dr. Palmer seeks to rely upon portions of the ’100 Patent that are either entirely unrelated to the selection of delay intervals (*see, e.g.*, Dr. Palmer’s discussion of the Figure 6(a)-6(b) embodiments), or that relate to after-the-fact impacts that may result from the implementation of a specific compressor delay (*e.g.*, the Figure 8(a)-8(c) embodiments). *See supra* at SUF 22-28. Dr. Palmer’s theory must fail because “[p]ointing to an amalgam of disclosures from which an artisan could have created the claimed invention does not satisfy [the written description] requirement.” *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021).⁵

Specifically, Dr. Palmer first relies upon a disclosure in the specification that a disclosed server will be capable of predicting a rate of change in inside temperature. Ex. 5 [Palmer Report] at ¶ 118. Notably, while the specification discloses that the predicted rate of change may be used to determine “when the HVAC system must be turned on in order to reach the desired temperature at the desired time,” the specification is completely silent regarding the potential use of a predicted rate of change to *determine* a delay interval—as is required by the Determining Limitation of the asserted claims. *See* Ex. 2 [’100 Pat.] at 8:20-38. Instead, Dr. Palmer relies upon “the inventor[s’ ability] to describe and depict the impact that their invention would have on the operation of an

⁵ Similarly, “[a] patent owner cannot show written description support by picking and choosing claim elements from different embodiments that are never linked together in the specification.” *Flash-Control, LLC*, 2021 WL 2944592, at *4.

HVAC system” in Figures 8a-8c. *See* Ex. 5 [Palmer Report] at ¶ 117. But, “[t]he written description requirement is not met if the specification merely describes a desired result.” *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 682 (Fed. Cir. 2015). Thus, the description of the after-the-fact impact of a selected compressor delay interval does not describe the claimed evaluation and determination steps.⁶

Dr. Palmer’s opinion is tantamount to an opinion that because the disclosed system is capable of predicting a rate of change, and because the specification discloses the impact of various delay intervals, it would be obvious to use the predicted rate of change for the purposes of selecting a ventilation delay interval. However, “a description that merely renders the invention obvious does not satisfy the [written description] requirement.” *Ariad*, 598 F.3d at 1352. And EcoFactor cannot rebut that the ’100 Patent fails to describe the Evaluating Limitation and Determining Limitation of the ’100 Asserted Claims so as to “reasonably convey” to a person of ordinary skill “that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad*, 598 F.3d at 1351.

B. EcoFactor Cannot Establish That ecobee Indirectly Infringes the -00428 Asserted Patents

1. EcoFactor Cannot Establish Induced Infringement as to the -00428 Asserted Patents

Under 35 U.S.C. § 271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” “[F]or induced infringement, it is necessary for the plaintiff to show that

⁶As noted above, Figures 8(a)-(c) discuss only compressor delays and not ventilation system delays as required by the claims of the ’100 patent. But even if one improperly equates a compressor delay with a ventilation system delay, the asserted claims of the ’100 patent still fail the written description requirement because the specification does not describe the claimed Evaluating and Determining Limitations with regard to any delay interval.

the alleged inducer *knew of the patent* in question and *knew the induced acts were infringing.*” *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 637 (2015) (emphasis added).⁷

Here, as a threshold matter, EcoFactor cannot prove that ecobee knew of the -00428 Asserted Patents prior to the filing of the Complaint initiating this lawsuit. EcoFactor readily admits that it did not provide ecobee with notice of the -00428 Asserted Patents prior to filing the Complaint in the -00428 action. *See supra* at SUF 31. And EcoFactor has no testimony from any ecobee witnesses (or any other evidence in the record) demonstrating pre-suit knowledge of the -00428 Asserted Patents. *See supra* at SUF 30 (showing that, at most, certain ecobee employees had generally heard of EcoFactor as a company, but not establishing knowledge of any EcoFactor patents). Moreover, EcoFactor’s assertion that ecobee was aware of *other* EcoFactor patents that EcoFactor had asserted against ecobee in other litigations prior to the -00428 litigation does not establish that ecobee had the requisite knowledge of the -00428 Asserted Patents necessary to find pre-complaint inducement. *See, e.g., Meetrix IP, LLC v. Cisco Systems, Inc.*, No. 1-18-CV-309-LY, 2018 WL 8261315, at *2 (W.D. Tex. Nov. 30 2018) (“[I]t is a patent's claims that put potential infringers on notice, not the specification.”); *Finjan, Inc. v. Juniper Networks, Inc.*, No. C 17-05659 WHA, 2018 WL 905909, at *3-5 (N.D. Cal. Feb. 14, 2018) (“allegations that Juniper knew about Finjan's patent portfolio and an ‘exemplary,’ non-asserted patent remain insufficient”).

Because EcoFactor cannot establish that ecobee had knowledge of the -00428 Asserted Patents prior to the Complaint being filed, the Court should grant summary judgment that EcoFactor cannot prove induced infringement by ecobee. *See Aguirre v. Powerchute Sports, LLC*, No. SA-10-CV-0702 XR, 2011 WL 2471299, at *3 (W.D. Tex. June 17, 2011) (“To the extent

⁷ Note, by focusing its summary judgment arguments herein with respect to knowledge and intent, ecobee is in no way waiving any other arguments with respect to lack of induced infringement (e.g., that EcoFactor has failed to prove direct infringement, that ecobee is not encouraging infringing acts).

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Aguirre relies on knowledge of Aguirre's patent after the lawsuit was filed, such knowledge is insufficient to plead the requisite knowledge for indirect infringement.”); *ZapFraud, Inc. v. Barracuda Networks, Inc.*, 528 F. Supp. 3d 247, 252 (D. Del. 2021) (“[T]he operative complaint in a lawsuit fails to state a claim for indirect patent infringement where the defendant's alleged knowledge of the asserted patents is based solely on the content of that complaint or a prior version of the complaint filed in the same lawsuit.”). At the very minimum, the Court should grant summary judgment that EcoFactor cannot prove any pre-suit induced infringement by ecobee—as all pre-suit acts would have been done without knowledge of the -00428 Asserted Patents.

EcoFactor cannot sustain a claim for induced infringement against ecobee for a second reason: even assuming, *arguendo*, ecobee was aware of the -00428 Asserted Patents, the record does not allow EcoFactor to establish that ecobee had “knowledge that the induced acts constitute patent infringement.” *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011). As noted above, one week before EcoFactor filed the -00428 litigation on April 28, 2021, ALJ Shaw issued his ID in the 1185 Investigation finding the ecobee products not to infringe the EcoFactor patents at issue there. *See supra* at SUF 38-43. Among other limitations, the ID found the ecobee products not to infringe claim limitations requiring receiving outside temperature measurements and calculating one or more rates of change in inside temperature. *See supra* at SUF 40-41. This ID followed a one-year Investigation in which EcoFactor took extensive discovery regarding ecobee’s products, and willingly dismissed three of the four patents originally asserted against ecobee on the eve of the hearing. *Id.*

Accordingly, when EcoFactor filed its complaint initiating the -00428 litigation, ecobee had good reason to believe—both objectively and subjectively—that the ecobee Accused Products do not infringe the -00428 Asserted Patents, and that ecobee was not inducing its customers to

commit infringing acts. This is especially true since the '100 and '186 Patents asserted by EcoFactor here include claim limitations requiring receiving outdoor temperature measurements, and calculating or predicting rates of change in inside temperature—the same requirements that the ecobee products were found not to practice in the 1185 ID. See *supra* at SUF 42.

Moreover, ever since the -00428 litigation was filed, ecobee's belief that its products do not infringe the -00428 Asserted Patents has only been bolstered by its continued litigation success against EcoFactor. Namely, on July 20, 2021, the Commission determined not to review the 1185 ID's findings as to both non-infringement and invalidity. See *supra* at SUF 44. And, EcoFactor withdrew its appeal to the Federal Circuit of the 1185 Investigation. See *supra* at SUF 45.

Furthermore, another ITC investigation filed by EcoFactor against ecobee (the 1258 Investigation) resulted in more findings of non-infringement. Specifically, following another year-plus of litigation involving another round of extensive discovery related to ecobee products, ALJ Elliot issued his Initial Determination in the 1258 Investigation on April 4, 2022 finding that ecobee's products did not infringe any of the claims asserted against it. See *supra* at SUF 46-49. Once again, among other limitations, the ecobee products were found not to infringe limitations requiring receiving outside temperature measurements and predicting rates of change. See *supra* at SUF 48.

Accordingly, EcoFactor cannot establish that ecobee knowingly induced infringement by others.

2. EcoFactor Cannot Establish Contributory Infringement as to the -00428 Asserted Patents

Contributory infringement applies only “when a party sells ‘a component of a patented . . . combination . . . knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for

substantial noninfringing use.’” *Lifetime Indus., Inc. v. Trim-Lok, Inc.*, 869 F.3d 1372, 1381 (Fed. Cir. 2017) (quoting 35 U.S.C. § 271(c)). “Like induced infringement, contributory infringement requires knowledge of the patent in suit and knowledge of patent infringement.” *Commil USA, LLC v. Cisco Systems, Inc.*, 575 U.S. 632, 639 (2015).

Here, as described above with respect to induced infringement, ecobee’s lack of knowledge of the -00428 Asserted Patents and lack of knowledge of infringement foreclose a finding of contributory infringement. *See supra* at Sec. V.B.1.⁸

Moreover, ecobee should be granted summary judgment that it is not contributorily infringing the -00428 Asserted Patents for the independent reason that the Accused Products have substantial non-infringing uses. As a matter of law, the existence of substantial non-infringing uses of accused products defeats any claim of contributory infringement.⁹ *See* 35 U.S.C. § 271 *see also Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1327 (Fed. Cir. 2009) (“District courts have found, and we agree, that non-infringing uses are substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.”). Here, the ecobee Accused Products undeniably have substantial non-infringing uses. For example, the Accused Products are purposefully designed to operate and benefit the end user even in the absence of any Internet connection, and each of the accused functionalities require an Internet connection and interaction with remote servers to operate. *See supra* at SUF 55. Moreover, even when connected to the Internet, the accused functionalities are not even available to all users depending

⁸ ecobee is in no way waiving any other arguments with respect to lack of contributory infringement (e.g., that EcoFactor has failed to prove direct infringement) or direct infringement.

⁹ The existence of these substantial, non-infringing uses also precludes any inference of the requisite, specific intent for induced infringement. “Especially where a product has substantial non-infringing uses, intent to induce infringement cannot be inferred even when the defendant has actual knowledge that some users of its product may be infringing the patent.” *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1329 (Fed. Cir. 2009).

on the operating environments in which the Accused Products are connected. *See supra* at SUF 56-58.

Thus, the substantial non-infringing uses of the ecobee Accused Products defeat any claim of contributory infringement as to the -00428 Asserted Patents.

C. EcoFactor Cannot Establish that ecobee has Willfully Infringed the -00428 Asserted Patents

To establish willful infringement, the patentee must show the accused infringer had a specific intent to infringe at the time of the challenged conduct. *See Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 (2016). “The sort of conduct warranting enhanced damages has been variously described in our cases as willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate.” *Id.* at 1932. A patentee bears the burden to show by a pre-ponderance of the evidence the facts that support a finding of willfulness. *Id.* at 1934.

Mere “[k]nowledge of the asserted patent and evidence of infringement is necessary, but not sufficient, for a finding of willfulness. Rather, willfulness requires deliberate or intentional infringement.” *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 988 (Fed. Cir. 2021).

As with induced infringement and contributory infringement discussed above, ecobee’s lack of knowledge of the -00428 Asserted Patents and lack of knowledge of infringement in view of ecobee’s ongoing litigation success against EcoFactor foreclose a finding of willful infringement. *See supra* at Sec. V.B.1 and V.B.2; SUF 60-61; *see also ZapFraud, Inc. v. Barracuda Networks, Inc.*, 528 F. Supp. 3d 247, 252 (D. Del. 2021) (“And I conclude that the operative complaint in a lawsuit fails to state a claim for willfulness-based enhanced damages under § 284 where the defendant’s alleged knowledge of the asserted patents is based solely on the content of that complaint or a prior version of the complaint filed in the same lawsuit.”).

D. The Asserted Claims of the '327 Patent Are Directed to Patent-Ineligible Subject Matter Under 35 U.S.C. § 101

“Laws of nature, natural phenomena, and abstract ideas are not patentable” under 35 U.S.C. § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). Under the twostep framework for determining invalidity under § 101 set out by the Supreme Court in *Alice*, the Court must first determine whether a claim is “directed to” a patent ineligible abstract idea. *Id.* at 217. If a claim is directed to an abstract idea, the court then considers the elements of each claim individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. *Id.* Patent eligibility under § 101 is an issue of law. While the legal determination in *Alice* step two may contain underlying factual issues, where, as here, there are no material factual disputes, summary judgment should be granted. *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1299 (Fed. Cir. 2020) (finding “no dispute of any material fact” and granting summary judgment that the asserted claims are not patent eligible). Summary judgment should be granted “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a).

1. Alice Step One: the '327 claims are directed to the abstract idea of changing the thermostat setting in response to a request to reduce energy usage.

The asserted claims of the '327 patent recite functions that reflect nothing more than the abstract idea of telling the thermostat to turn off the HVAC system in response to a request from a utility to reduce energy usage. After removing extraneous verbiage, independent claim 1 of the '327 patent recites the following functional sequence: (1) receiving a request from a utility to reduce energy usage, (2) determining whether that home is participating in the demand reduction program, and (3) if so, responding to that request by sending a signal to change the thermostat

setting. These functions of coupling a thermostat with a computer network to receive and verify demand reduction requests are an abstract idea, like that the Federal Circuit found invalid in *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 768 (Fed. Cir. 2019) (finding claimed invention to be “nothing more than the abstract idea of communication over a network for interactive with a device.”

Similarly, the '327 dependent claims do not substantively add to these core functions. Instead, they recite generic components used in a conventional manner, like servers receiving outside temperatures for geographic zones (claim 2) or servers configured to send an alert to the home's owner or occupant (claim 10). The claims do not define any technological improvements upon such components, but merely recite the functions they must carry out. *See, e.g.*, Ex. 21 at 5:19-46 (referring to “conventional” computer and HVAC equipment); *see also supra* at SUF 71; Ex. 22 [Hublou Tr.] at 126:13-22; 136:1-138:1.

Furthermore, all of the essential functions of the '327 asserted claims can be performed by humans. *See supra* at SUF 72-75. In fact, the demand reduction verification recited in '327 claim 1 does not rely on any computations or calculations at all. It simply requires receiving a request, checking that request against a list of participating structures, and then acting on the request by sending a signal to change the thermostat setting of any participating structure. Devoid of any claim limitations on how the enumerated functions are carried out, the claim language would cover any thermostat communicating over a computer network with a utility about demand reduction requests, “thus preempting the entire industry's ability to use” computer-connected thermostats to help utilities reduce power consumption at peak times. *See ChargePoint*, 920 F.3d at 770. For these reasons, these claims are abstract and therefore fail Alice step one.

2. Alice Step Two: the '327 claims do not contain an inventive concept.

The claims of the '327 patent likewise fail Alice step two because they lack an inventive concept; they merely provide a “wholly generic computer implementation,” *Alice*, 573 U.S. at 223, and recite nothing more than the ineligible concept itself. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1289-90 (Fed. Cir. 2018) (explaining that, under Alice step two, an inventive concept must provide “significantly more” than the “ineligible concept itself.”) The '327 claims merely recite generic components—like an HVAC system, thermostat, and servers—performing conventional functions. *See, e.g.*, Ex. 21 at 5:19-33, 5:51-53; Ex. 22 at 126:13-22, 136:1-138:1. Instead of disclosing “a specific technical solution,” the '327 asserted claims “simply us[e] generic computer concepts in a conventional way,” *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016), and thus do not “transform the claimed abstract idea into a patent-eligible application,” regardless of whether the steps are considered “individually” or “as an ordered combination,” *OIP Tech., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015). And, as admitted in the patent specification, the functions of receiving a demand reduction request and reacting to the receipt of a demand reduction request from a utility were also familiar concepts. *See, e.g.*, Ex. 21 at 2:15-3:17. Accordingly, they cannot provide the necessary inventive concept.

Moreover, the '327 claims do not recite the method by which the demand reduction is performed. They describe only a result, by claiming generic servers that are “configured” to receive a demand reduction request, “determine” whether the structure is participating in a demand reduction program, and then “send a signal” to the thermostat to change the HVAC setting if so. Nothing in the claims explains how any of this is to be done, and thus, the claimed method is not inventive. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016) (“a claim that

merely describes an ‘effect or result dissociated from any method by which [it] is accomplished’ is not directed to patent-eligible subject matter”).

VI. CONCLUSION

ecobee respectfully requests the Court grant ecobee’s motions for partial summary judgment for the reasons described above.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document was filed electronically UNDER SEAL and served by e-mail on December 30, 2022, to all counsel of record.

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